National Institute of Environmental Health Sciences

Quantification of the regional carbon cycle of the biosphere: Policy, science and land-use decisions

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Abstract:

This paper addresses some issues related to the carbon cycle and its utilization by society. Traditional uses for agriculture, forestry, as a source of fuel and other products, and for pastoral farming, among others, have recently been supplemented by identifying its potential for mitigating the increasing concentration of greenhouse gases in the atmosphere. Through the Kyoto Protocol, carbon has become a commodity and the CO(2)-absorbing capability of the vegetation and soils an economically valuable asset. The multi-facetted roles of the C cycle and its sensitivity to human activities present a demand for techniques that permit accurate, timely and affordable characterization of the various components of this cycle, especially on land where most human activities take place. Such techniques must satisfy a range of demands in terms of purpose, clients for the information, and biosphere properties. However, if successful, they offer the potential to support monitoring, reporting, policy setting, and management of terrestrial biospheric resources. The context for these requirements and possibilities is illustrated with reference to the China Carbon Sequestration Project and its findings.

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Resource Description

Communication: ☑

resource focus on research or methods on how to communicate or frame issues on climate change; surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience: ☑

audience to whom the resource is directed

Policymaker

Exposure : ☑

weather or climate related pathway by which climate change affects health

Unspecified Exposure

Geographic Feature: ☑

resource focuses on specific type of geography

None or Unspecified

Geographic Location: ☑

resource focuses on specific location

Non-United States

Non-United States: Asia

Asian Region/Country: China

Health Co-Benefit/Co–Harm (Adaption/Mitigation): ☑

specification of beneficial or harmful impacts to health resulting from efforts to reduce or cope with greenhouse gases

A focus of content

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Mitigation

Resource Type: ☑

format or standard characteristic of resource

Policy/Opinion, Review

Timescale: ☑

time period studied

Time Scale Unspecified